

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 58-037622

(43)Date of publication of application : 04.03.1983

(51)Int.Cl.

G02F 1/17  
G09F 9/00

(21)Application number : 56-136545

(71)Applicant : NIPPON DENSO CO LTD

(22)Date of filing : 31.08.1981

(72)Inventor : MURAMATSU HIROMOCHI  
HARA KUNIHIKO

## (54) ELECTROCHROMIC DISPLAY DEVICE

## (57)Abstract:

PURPOSE: To obtain a long-life display device which prevents coloring by reduction of transparent electrodes, dislodging thereof from a transparent electrode, etc. by coating the surface of the transparent electrodes of an electrochromic display device (ECD) with a transparent protecting film which is electrochemically inert.

CONSTITUTION: After transparent electrodes 2 consisting of metal oxide such as  $\text{In}_2\text{O}_3$  are formed on a transparent substrate 1, a transparent protecting film 3 such as gold or silver which is electrochemically inert is formed on the electrodes 2 to about 150 $\text{\AA}$ ; thickness by a vacuum vapor deposition method, a sputtering method, etc. An EC layer such as  $\text{WO}_3$  is formed on the film 3, then a substrate 7 having a counter electrode 6 and the substrate 1 are sealed by means of a spacer 8 by sandwiching a solid, semi-solid or liquid electrolyte therebetween. Thus coloring of the electrodes 2 on account of their conversion to the metal by reduction, generation of  $\text{H}_2$  or the like and the stripping of the electrodes from the substrate 1 are prevented.

